CHAPTER 5

Award fees and other Incentives

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A. Chapter Summary

- Award fees and other incentives can motivate contractors to use software development best practices. By encouraging the use of best practices, innovative incentives can improve bottom line program parameters (including end user satisfaction, development cost, development productivity, maintenance cost, maintenance productivity, software quality, time-to-market, and cost and schedule predictability).
- This chapter first defines how award fees and other incentives function, then raises issues regarding award fees and other incentives for the government to consider before it forms contractor questions, and, finally, suggests possible contractor questions related to incentives.
- Selecting the type of contract to be implemented is as fundamental a decision as there is in the acquisition process. In the software acquisition process, the complex nature of the effort and the end-product may require an extra level of sophistication or experience on the part of the government as well as the contractor.
- The government team and the contractor team have in-depth acquisition decisions to make of both a business and engineering nature.
- In more recent years, the "award fee" contract has been found effective when used for software projects. The most successful software projects have been government and contractor teams which work closely together and think "outside of the box."
- Government thinking on incentives must go beyond fulfilling the many specific Federal Acquisition Regulations (FAR). The government and contractor teams individually and together must be inventive and innovative.
- After the individual government and contractor teams look at the same contract from different sides, it is imperative that they look at that contract from all sides together.
- This chapter refers frequently to the Federal Acquisition Regulations governing contracts and contract incentives. Readers interested in studying the FAR, an essential step for adequate contract preparation, can download it at the following Web site: www.arnet.gov/far/97-01/html.
- More experienced government acquisition specialists, who already know very well how award fees and other incentives function, may want to skip ahead to Section D (Government Issues) and Section E (Contractor Questions).

B. How Incentives Function

- Selection of contract type is the basis of a system of "incentives and penalties" to guide the contractor in its performance.
- Government contracts may be firm-fixed-price or cost-reimbursable.
- In firm-fixed-price contracts, the contractor takes sole responsibility for the project coming in over or under budget, paying for all costs over budget (cost overruns) and receiving additional profit if the project comes in under budget.

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Given the frequent cost overruns of software development projects, the government should strongly prefer this type of contract.

- In cost-reimbursable contracts, the government reimburses the contractor for all project costs.
- Both types of contracts may include contract incentives related to program parameters, specifically project cost, schedule, or performance.
- Award fee contracts are a type of incentive contract.
- All incentive contracts must include cost incentives (FAR, Subpart 16.402). Incentive contracts include the following:
    1. Negotiated target cost
    2. Cost incentive
    3. Target profit or fee
    4. Profit or fee adjustment formula, working within either a price ceiling or a minimum or maximum fee
    5. Other optional incentives, especially schedule and project performance incentives
    6. A negotiated process by which the government evaluates how well the contractor meets incentive targets
- Contract incentives for cost, schedule, and performance function as follows:
    1. The contracting organization receives the target incentive (structured either as additional profit or as a fee) when it meets the negotiated target program parameter in cost, schedule, and/or performance
    2. The government bases any adjustment (up or down) of the target incentive or fee on a specific formula analyzing project cost, schedule, and/or performance
    3. If project cost exceeds negotiated target cost (i.e. the project suffers cost overruns), the government reduces contractor payments by either the amount of the overrun or an agreed-upon percentage of the overrun. This shares fairly the burden of overruns between the government and contractor
    4. Again, the government and the contractor negotiate the percentage of cost overruns shared by the contractor
    5. If project cost is lower than target cost, the government rewards the contractor either with the difference or with an agreed-upon percentage of the difference.

C. How Award Fees Function

- An award fee (whether the contract is fixed-price or cost-reimbursable) consists of (a) a base amount (which may be zero) fixed at inception of the contract and (b) an award amount, based upon a judgmental evaluation by the government, sufficient to provide motivation for excellence in contract performance.
- The government may establish award fee incentives meeting the following criteria (FAR, Subpart 16.404):

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1. The government pays any award fee in addition to an established fixed price for the contract
2. The established fixed price includes normal profit
3. The Award Fee Plan (AFP*), outlined in a contract attachment, grades contractor performance in negotiated areas
4. The government performs periodic evaluations of contractor performance against the AFP
5. The contractor chooses whether to use the contract's award fee provision
6. The AFP identifies the following:
   a) The Fee-Determining Official
   b) The composition of the government's Award Fee Review Board (AFRB)
   c) Award fee criteria
   d) Award fee evaluation periods
   e) Potential award fees per period
   f) General procedures for determining the award fee in each period
7. The government generally uses award fee incentives only when it cannot define contract requirements in sufficient detail to allow performance-based contracting
8. The government may set up award fees in any type of contract, at any stage of the software project life cycle.

- According to FAR, subpart 16.4, the government may institute award fee contracts whenever it meets two conditions: a) it deems a firm-fixed-price contract inappropriate; and b) it believes the award fee contract will help acquire the needed product at a lower overall cost. In the context of software development projects, award fees make sense for the following reasons:

1. The widespread failure by software development contractors to use best practices, and the impressive benefits to the government of using best practices, make the use of award fees or other incentives to encourage best practices eminently sensible
2. The frequent cost overruns on government software development projects make it unlikely that contractors will agree to firm-fixed-price contracts
3. Independent analyses by the Software Program Managers Network (SPMN) and other organizations of the cost overruns endemic to software projects have concluded that the use of best practices that lower cost and increase cost predictability would prevent cost overruns. Thus, using the tool of award fees to encourage the use of best practices would likely lower overall project cost
4. The government thus meets both FAR requirements [conditions a) and b) above] for award fee usage for software development projects.

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- The government determines unilaterally whether and how much of the award fee to pay the contractor. This government decision is not subject to the Disputes Clause. FAR expressly excludes the operation of the Disputes Clause in any disagreement by the contractor concerning the amount of the award fee.
- The government may use award fee provisions in fixed-price contracts when other incentives cannot be used because contractor performance cannot be measured objectively.
- If the government uses a fixed-price contract, the fixed price includes normal profit. The government will pay this price for satisfactory program parameters, and pay any award fee earned in addition to that fixed price.
- The government may use cost-plus-award-fee contracts when the work to be performed is such that it is neither feasible nor effective to devise predetermined objective incentive targets applicable to cost, technical performance, or schedule.
- A cost-plus-award-fee contract is a cost-reimbursement contract that provides for a fee consisting of a) a base amount fixed at inception of the contract and b) an award amount that the contractor may earn in whole or in part during performance.
- Award fee contracts shall provide for evaluation at stated intervals during performance, so that the contractor will periodically be informed of the quality of its performance and the areas in which improvement is expected. Partial payment of fee shall generally correspond to the evaluation periods. This makes effective the incentive which the award fee can create, by inducing the contractor to improve poor performance or to continue good performance.

D. Government Issues

- Goals: Incentives demand careful consideration by the government. The government must clearly understand the goals of each incentive it establishes for a given project. What does the government really need (in terms of project cost, schedule, and/or performance)? Is the government asking for anything in its requirements or other project characteristics that is wanted but not needed? Is there "value added" without being "value-needed?"
- Benefits: Award fees and other incentives do not manage themselves. The benefits of establishing incentives must outweigh the administrative costs the government will incur in managing the award fee or other incentive contract.
- Rationale: The increased chances of the government receiving a quality software product may justify the labor-intensive nature of the process. Furthermore, given the difficulties of software development generally, and in particular the difficulties of the large-scale software development projects common in government and military software projects, the government should strongly consider utilizing any additional tool likely to generate concrete improvements in project parameters.
- Priorities and Tradeoffs: Which of the following criteria does the government

prioritize—project performance, schedule, cost, or other factors? What is important? How and why is it important? [If cost, schedule, and performance are dominant and readily measured, maybe award fee is inappropriate.] However, again, the government needs to think "outside of the box." The number of evaluation criteria and the requirements they represent will differ widely among contracts. The criteria and rating plan should motivate the contractor to improve performance in the areas rated, but not at the expense of at least minimum acceptable performance in all other areas.

- Bottom-Line Program Parameters: How can the government link award fee or other incentives criteria (e.g., by using the AFP) with software project success parameters such as end user satisfaction, development cost, development productivity, maintenance cost, maintenance productivity, software quality, time-to-market, and cost and schedule predictability?
- Best Practices Linking: How can the government link award fee or other incentives criteria (e.g., by using the AFP) with best practices such as risk management, earned value requirements management, interface management, planning and tracking, quality gates, peer reviews, program-wide visibility of progress vs. plan, configuration management, and people-aware management?
- Flexibility: Does the AFP provide the government with the flexibility to evaluate both actual performance and the conditions under which it was achieved?
- Responsibility of Government/Contractor: How does the government plan to apply particular incentives in cases where its own action or inaction, or other factors beyond the control of the contractor, affect the project negatively or otherwise impact on contractor achievement of incentives criteria? For instance, for delivery incentives, how does the government plan to apply these incentives in the event of government-caused delays or other delays beyond the control of, or not due to the fault or negligence of, the contractor? Also, frequent requirements change on software projects, related to poor requirements management by the contractor and/or government, may function as contractual changes impacting on performance and other incentives.
- Risk Management: Can the government encourage the contractor to implement a more rigorous risk management process by requiring that the contractor outline precisely those risks where external dependencies (e.g., on the government, subcontractors, etc.) could adversely affect program parameters or incentives criteria?
- Objective Evaluation Process: How can the government ensure, whenever possible, that its evaluation process measures incentives objectively rather than subjectively? The incentive review process often risks subjective evaluations not truly measuring bottom-line program parameters.
- Testing and Performance Incentives: The contractor's testing program may need government evaluation to determine its usefulness in supporting perfor-

mance incentive decisions (see also Chapter 4, Quality, of this guidebook).

- Components and Performance Incentives: How can the government separate out, for the purpose of performance incentives, the impact on project performance of government components vs. the impact of contractor components?
- History: Multiple-incentive contracts were popularly used and misused throughout the 1960s and 1970s.
- Steps: Can the government achieve its goals in one fell swoop, or is it more realistic to use an iterative approach and series of goals?
- Metrics: Knowing what is needed and what, how, and why it is important, how can achievement be measured so that the contractor may be reimbursed for that achievement, and receive additional award for achievement beyond that "reasonably" expected? Whatever factor award is to be based upon, is there an accounting system adequate for determining that factor?
- Evaluation: What constitutes appropriate government evaluation and monitoring during performance, and is it in place?
- Type of Contract: Since it is usually to the government's advantage for the contractor to assume substantial cost responsibility and an appropriate share of the cost risk, the government should prefer fixed-price, award fee contracts when contract costs and performance requirements are reasonably certain.
- AFP Procedures:
  1. What procedures need to be established for conducting the award fee evaluation?
  2. For this particular project, at what points in the project schedule would government evaluation of contractor performance against the AFP be most appropriate? How do these schedule points correspond with the best practices of a) binary quality gates at the "inch-pebble" (as opposed to "milestone") level, and b) earned value management?
  3. Which government individual, senior to the government contracting officer, approved the award fee plan?
  4. Is it clearly understood that the amount of the award fee to be paid is determined by the government's judgmental evaluation of the contractor's performance in terms of the criteria stated in the contract, and is not subject to the Disputes Clause?
- Award Fee Review Board:
  1. Has an Award Fee Review Board been established by the government and agreed to by contractor?
  2. What characteristics, background, experience, or skills should the members of the Award Fee Review Board possess?
- Motivation: What size award fee is sufficient to provide motivation for the contractor to implement proven best practices and improve bottom-line program parameters? Do contractors agree with

the government that this amount is sufficient?

- In what "box" do you currently think? What limits might that "box" impose on your ability to receive a successful software project from a contractor?

E. Contractor Questions

- Goals: What can you really provide? Are you providing anything that is not needed? Is all "value" truly "needed?"
- How will your risk management system interact with the contract incentive system to help you meet the negotiated targets for this program? In other words, how will you ensure that unforeseen risks do not become problems preventing your attaining program targets for cost, schedule, and performance?
- How will you decide whether or not delays or other program problems are due to events beyond your control or not otherwise your responsibility? How will you work or communicate with the government or your subcontractors to allocate or define responsibility? Given the essential nature of a strong risk management program for software project success, what portion of responsibility will you own for program problems? What award fee or other incentive reductions would appropriately correspond to your responsibility?
- Do you use a common database with standardized outputs for all program schedules? Do your database outputs contain various levels of detail and sorts for different program management levels/functions? Do your program schedules trace horizontally and vertically no matter the sort?
- Have you established measurement baselines for program parameters, including project cost, schedule, and performance? If so, please describe your measurement baselines. How do you measure program achievements such that the government may reimburse you for "reasonable achievement" and give additional award for achievement beyond that "reasonably" expected?
- Have you implemented a measurement system in which you and the government may assess program progress versus your measurement baselines? If so, please describe your system. How often do you monitor this system to determine whether the program is meeting its targets?
- How would you propose that the government tailor this contract to the needs of this particular software project?
- Do you understand that the government determines unilaterally whether and how much of the award fee to pay you, and that this government decision is not subject to the Disputes Clause?
- Whatever factor award is to be based upon, is there an accounting system adequate for determining that factor?